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The present work reports the study of bacterial and yeast activity for the compound **2**. The bacteria used in this study are *Staphylococcus aureus, Escherichia coli* andtheyeast are *Saccharomyces Cerevisiae Candida albican*.The results that we will present are the determination of minimal inhibitory concentration (MIC), by means of microdilution by plate method and the specific growth constants for this microorganism.

Further studies are being performed to determine viability and cellular injury with this drug.

Bacteriostatic synergistic effect between of crude extract of Brazilian trees leaves

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The use of medicinal plants in the world, and especially in South America, contributes significantly to primary health care. Many plants are used in Brazil in the form of crude extracts, infusions or plasters to treat common infections without any scientific evidence of efficacy. This study aimed to evaluate the antimicrobial activity of hydroalcoholic extract from leaves of *Eugenia uniflora*, *Syzygium cumini* and association between the extracts against *Staphylococcus aureus* (ATCC25923). The antibacterial activities of extracts were determined by macrodilution techniques in BHI broth. The minimum inhibitory concentration (MIC) was determined by measuring the optical density in the spectrophotometer (540 nm) and was defined as the lowest concentration of crude extract that produced an 80% reduction in visible growth compared with control (non inoculated broth). MIC 80% values were different among extracts. *Eugenia uniflora* presented a good activity against the *S. aureus* with MIC of 2 mg/ml and *Syzygium cumini* presented reduction in visible growth, but less than 80%. The association between the extracts of leaves of different plant species showed the highest antibacterial activity with MIC of 0.5 mg/ml. Inhibitory activity on bacterial growth of the association of the hydroalcoholic extract from leaves of Syzygium cumini with Eugenia uniflora was higher when compared with the inhibition of bacterial growth promoted by extracts alone, indicating a bacteriostatic synergistic effect between these two extracts. Acknowledgments: FAPESP

Bee Propolis Effect on Protection of RBCs Membrane Integrity

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Propolis is a resinous substance collected from plants by bees. The propolis composition depends on the surrounding vegetation, the season, and the area from which derive. This hive product usually contains a variety of chemical compounds such as polyphenols (flavonoids, phenolic acids and esters), steroids, and amino acids.

The hereditary spherocytosis (HS) is a congenital hemolytic anemia, with origin in the modification of membrane proteins of erythrocytes, which leads to increased susceptibility to hemolysis and a decrease of the cell over-life. The HS is the most common red blood cell (RBC) membrane disorder in European Caucasians, with a prevalence of roughly 200-300 per 10^6, and to Japanese population 5.7-20.3 per 10^6.

The aim of the present work was to determine if propolis extracts could affected the red cell membrane integrity and comparing the effect of two propolis extracts from different regions (Bornes - Trás-os-Montes; Fundão - Beira Interior).

In this work, two adults were studied, one with the syndrome HS splenectomized and one healthy used as control. Diagnosis of HS was made by clinical features, identification of spherocytes on peripheral blood smears and abnormal osmotic fragility.

The results show that the two propolis extracts affected the erythrocyte membrane fragility in both individuals (control and patient with HS).

There is also a possibility for an oxidative damage of red blood cell membrane in HS, similar to the one recorded in other hemolytic anemia. Indeed, the spherocytes were found to be more sensitive than normal erythrocytes to the action of oxidation inducing drugs. Phenolic compounds of propolis have a large spectrum of pharmaceutical properties, however the more studied was the antioxidant activity. The second aim of the present work was to determine if hemolysis of RBCs could be induced by oxidative stress conditions, and to verify if the propolis can inhibit the hemolysis doing its antioxidant properties. Results show that when RBCs of patient with HS were incubated with 1 mM of H_2O_2, the hemolysis with and without oxidant had different levels. This effect was blunted when the RBCs were incubated with propolis extract, which might indicate that propolis act as free radical scavenger protecting the membrane integrity against oxidative effect.